

WEST SUFFOLK COUNTY COUNCIL

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ANNUAL REPORT  
of the  
Principal School Medical Officer  
for the  
YEAR 1963

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LONDON COUNTY COUNCIL

D. A. McCracken, M.D., D.P.H.  
*Principal School Medical Officer*



WEST SUFFOLK COUNTY COUNCIL  
EDUCATION COMMITTEE



Telephone Number:  
Bury St. Edmunds 2281.

Westgate House,  
Bury St. Edmunds.

To The Chairman and Members of the Education Committee.

Mr. Chairman, Ladies and Gentlemen,

I have the honour of presenting my report on the work of the School Health Service for the year 1963.

The 18,300 children in attendance at Council Schools were generally of good physique and none of the 3,603 pupils examined at routine medical inspections were found to suffer from any physical defect due to malnutrition. The report, however, of the Physical Education Organiser is somewhat disappointing regarding girls, which is indirectly due to the national shortage of qualified specialist teachers of physical education. There were no outbreaks of zymotic diseases and it would now appear that following the introduction of oral poliomyelitis vaccine the risk of this disease amongst the child population has been virtually eliminated, in the same way as diphtheria as an endemic disease was controlled by the nation-wide immunization campaign in 1941.

The medical, nursing and dental staff situation has been improved during the year and at the time of writing the number of dental surgeons on the staff is the highest since the end of the War. It is hoped that when the new Health Clinics are completed at Sudbury and Bury St. Edmunds, physical conditions will exist which will allow for the employment of dental auxiliaries working under direct supervision of qualified dental surgeons. The provision of a second mobile dental surgery, together with an additional full-time dental surgeon, has taken the school dental service to areas in the county where school children have never seen a dentist.

The decision of the County Council as the Local Health Authority, after repeated debate, to accept the principle of adjusting the fluorine content of the public water supplies in order to diminish the incidence of dental caries, must be one of the most important public health measures taken for many years. This is an historic decision and as a matter of record and information I have included as an appendix an abridged report of the evidence which was presented to the County Council through its Health and Welfare Committee.

The facilities for promoting the emotional aspects of hygiene in the schools appear to be developing along sound lines. The work of the Educational Psychologist continues to expand throughout the county and regular advisory and diagnostic sessions are held in several districts. The provision of a central Health Clinic in Bury St. Edmunds with a suite designed for Child Guidance, is the forerunner of a projected full Child Guidance team. The preparations for building are at an advanced stage and it is hoped that it will be available in about 18 months' time.

The mobile anti-smoking exhibition sponsored by the Ministry of Health and staffed by the Central Council for Health Education, paid visits to a number of Grammar Schools and Secondary Modern Schools. I personally attended a number of the talks and the children appeared to be impressed and a number asked intelligent questions. To the casual observer, however, the propaganda which is distributed from central departments appears to have had little effect on school children and adolescents.

I acknowledge with thanks the cordial co-operation of my medical and lay colleagues and the helpful interest and encouragement taken in the School Health Service by the Chairman and members of the School Welfare Sub-Committee.

I have the honour to be,  
Your obedient Servant,

DAVID ANDREW McCracken,

Principal School Medical Officer

6th August, 1964.



## STAFF OF THE SCHOOL HEALTH SERVICE

Principal School Medical Officer	D. A. McCracken, M.D., D.P.H.
Deputy Principal School Medical Officer	A. J. Rae, M.R.C.S., L.R.C.P., D.P.H.
Senior Medical Officer for Mental Health	J. L. Evans, M.R.C.S., L.R.C.P., M.B. B.S., D.(Obst.)R.C.O.G., D.P.H.
School Medical Officers	*E. Kinnear, M.B., Ch.B., D.P.H. *P. Coggin Brown, M.R.C.S., L.R.C.P., D.P.H. *A. F. Morgan, M.B., B.S., L.R.C.P., L.R.C.S., L.R.F.P.S., D.P.H. Mrs. D. C. Wall, B.A., M.R.C.S., L.R.C.P.
Principal School Dental Officer	S. H. Pollard, L.D.S.
Dental Officers	J. Dewar, L.D.S. (part-time). R. E. Lee, L.D.S. (part-time). Mrs. S. Tribe, B.D.S., L.D.S.
Superintendent School Nurse/Health Visitor	Mrs. M. P. Williams, S.R.N., S.C.M., H. V. Cert.
School Nurses, etc. (as on 31.12.63)	18 School Nurse/Health Visitors (one part-time), and four dental attendants (two part time)
Speech Therapists	Miss B. M. Elton, L.C.S.T. Mrs. V. Pickering L.C.S.T. (from 25.3.63)
Educational Psychologist	A. J. Storey, B.A.

\* Also Medical Officer of Health for County Districts.

## ANNUAL REPORT OF THE PRINCIPAL SCHOOL MEDICAL OFFICER

The county of West Suffolk has an area of 390,916 acres. The estimated population at mid-1963 was 137,760. There are no county boroughs within the county.

At the beginning of the year there were 18,371 children on the rolls of the schools (18,900 in January 1964). Some were Americans whose fathers were serving in the United States Air Force Stations in West Suffolk.

At the end of 1963 there were 119 schools in the county, five being grammar schools (including one bilateral school), 12 modern secondary schools and 102 primary schools.

## MEDICAL INSPECTIONS

During the year the school medical officers visited every school in the county at least once, some of them several times, and discussed with the headmasters matters relevant to individual children or to the school as a whole. Routine examination of the entrants was carried out in all schools where there were children of this age group. It was gratifying to find that where any significant defect requiring treatment was found, in practically every case the defect was already receiving treatment and that 'handicapped' children were already known to the school health service, usually as the result of the work of the health visitors with pre-school children. This is especially well marked when the health visitor is attached to and is in frequent touch with a group of general medical practitioners. Only three children amongst all age groups were noted as being "in an unsatisfactory physical condition". At some of the secondary schools all children in the 'leaver' groups were examined. No new significant physical defects were found apart from defects of vision. At the other secondary schools the pupils in the 'leaver' groups had their vision tested and were seen by a school medical officer who selected for further examination any who seemed to require it. In addition to the above, the school medical officers got in touch with the schools without delay whenever the headmaster sought the help of the school health service, either about some individual child, or about a general matter. In many cases this led to a special visit being paid to the school. The policy of installing telephones in schools has been of great assistance in this connection and has saved many special visits.

### Vision Testing.

Vision testing is carried out as a routine on all entrants during their first year at school, during the year in which the children have their ninth, eleventh and fourteenth or fifteenth birthdays. Unfortunately, not all the routine testing of the middle groups was completed in 1963. Greater priority will be given to this during 1964 and less to routine medical inspections. It will be appreciated that the more time the school nurse spends in attendance at routine medical inspections the less time she will be able to devote to vision tests and other procedures.

### Audiometry.

The policy of giving priority to the testing of school children of any age, who were suspected by teachers of deafness, was continued. Routine audiometry of entrants was begun. It is intended for the next few years to test the children at the town schools during their first term at school and those in the small country schools during their first year, but to keep a careful watch to see that this routine testing is not carried out at the expense of the promptness with which children of all ages are tested when suspected of being deaf. The logical result of the training of health visitors and medical officers in the importance and methods of detecting deafness during the first year or two of life would seem to be that the routine testing of entrants may later prove unnecessary. This may not be so, however, as it may prove useful in detecting children whose hearing is not grossly impaired but may be sufficiently so, particularly if accompanied by another handicap, to prevent the child from making proper progress at school. The routine testing of infants so far carried out has certainly shown that the hearing of certain young children appears to vary considerably from time to time. This seems to be largely, but not entirely, related to whether or not the child has frequent colds.

### Employment of School Children.

In accordance with the County Council's byelaws, the school doctors examined 322 children wishing to follow employment outside school hours. All were found fit. For many years now the school doctors have considered that the routine medical examination of all children who wish to be employed (as allowed by the byelaws) outside school hours, is no longer justified. At the end of the year the School Welfare Sub-Committee recommended that these examinations should not be carried out in all such cases, but should only be considered where the headmaster suspected, or the school health service records indicated, that the child was not fit for ordinary school life. This arrangement was agreed for a trial period of a year in the first instance and was confirmed by the Education Committee in January, 1964.

### Plantar Warts.

Plantar warts continue to occur in one or two children at all the modern secondary schools, and as a rule the children promptly seek and obtain treatment through the National Health Service. They form a considerable proportion of the 'skin defects' listed in table on page 11. At the end of this year there was, however, another 'outbreak' numbering thirteen cases at once, in a secondary school of three hundred and sixty. For the first time all but one of these affected were boys and it seems significant that the boys at this school had been doing gym in bare feet during the months preceding the occurrence of the multiple cases.

### "Winter Vomiting".

Several schools have been troubled by outbreaks of 'winter vomiting' during the year, but now that teachers have become more used to the phenomenon they do not always report it. Little is known about it, and in our present state of knowledge, nothing is known which can be done to prevent it, although it has the characteristics of a virus infection. Fortunately it is quickly over and never serious, and were it not for the nuisance of having several children suddenly taken ill at school it would probably never have come to the notice of the school health service. It is only in recent years that this particular type of infection has become prevalent. It will be interesting to see whether, in a few more years, it disappears.

### School Clinics.

No minor ailments clinics were held but, where necessary, children were seen at



the weekly clinic held in Bury St. Edmunds and at certain child welfare centres. An up-to-date list of these centres appears below. Most of the children attended for vaccination against infectious diseases.

Bury St. Edmunds	Lower Baxter Street Clinic	Every Wednesday
Barrow	Village Hall	4th Friday in each month.
Beck Row	Village Hall	2nd Wednesday "
Brandon	Church Institute	2nd Tuesday "
Clare	British Legion Hall	4th Wednesday "
Elmswell	Village Hall	2nd Thursday "
Exning	Church Hall	3rd Thursday "
Glemsford	Old School	4th Tuesday "
Gt. Cornard	Church Hall	4th Friday "
Hadleigh	Congregational Church Schoolroom	1st & 3rd Mondays "
Haverhill	West Suffolk Health Clinic	Every Friday "
Ixworth	Village Hall	3rd Thursday "
Lakenheath	Peace Memorial Hall	4th Thursday "
Long Melford	Village Hall	1st Tuesday "
Mildenhall	Bunbury Rooms	2nd Friday "
Nayland	Congregational Church Room	3rd Wednesday "
Newmarket	West Suffolk Health Clinic	1st & 3rd Tuesdays "
Rougham	Village Hall	3rd Friday "
Sudbury	Hardwicke House, Stour St.	1st & 3rd Thursdays "

#### HANDICAPPED PUPILS

The following table shows the numbers of handicapped pupils receiving or awaiting special education at the end of the year.

	Blind	Partially Sighted	Deaf	Partially Hearing	Physically Handicapped	Delicate	Maladjusted	Educationally Subnormal	Epileptic	Speech Defects	TOTAL
At special schools or hostels	4	1	12	1	5	5	13	19	2	1	63
At independent schools ..	-	-	1	-	-	-	2	8	-	-	11
Awaiting admission to special schools or hostels ..	-	-	-	1	-	-	7	5	-	-	13
Total .. ..	4	1	13	2	5	5	22	32	2	1	87

#### Education in Hospitals.

Forty West Suffolk children were known to have received education in hospitals. Fifteen of them were taught by the peripatetic teachers in Newmarket General Hospital, 11 in the West Suffolk General Hospital, Bury St. Edmunds and 14 others in hospitals outside the County.

#### Education at Home.

Seventeen children received education at home from qualified teachers.

They included two boys whose tuition was supplementary to ordinary school attendance - one whose education had been hindered by defective hearing and one who has sustained severe brain damage in an accident.

Of the others, 11 were absent from school because of physical disability and four were suffering from mental ill-health. One of these four was a 19 year old boy who received special coaching in "A" level subjects and who entered a university in the autumn.

#### Psychiatric Clinics.

Three hundred and forty-eight school children were known to have been treated at the child and family psychiatry clinics provided by the Regional Hospital Board.

#### Speech Therapy.

Speech Therapy work was strengthened by the appointment in March of another full

time therapist. This has naturally brought about an increase in the number of school children seen and treated, although perhaps not to the extent that might be expected were it not realised that previously a far greater number had been seen than was really advisable, and in many instances less frequently than was desirable.

During 1963, 217 children attending maintained schools were treated, of whom 55 were discharged.

#### VACCINATION AGAINST DISEASE

The following table shows the numbers of school children (or in the case of poliomyelitis, children and young persons born in the years 1944 to 1963 inclusive) who were vaccinated against various diseases during the year. The figures given for private practitioners are those received from the practitioners themselves.

	Private Practitioners	Assistant County Medical Officers
Poliomyelitis		
Primary vaccinations	1,328	516
Reinforcing vaccinations	867	333
Diphtheria		
Primary vaccinations	12	3
Reinforcing vaccinations	73	87
Combined Diphtheria/Pertussis/Tetanus		
Primary vaccinations	34	12
Reinforcing vaccinations	297	93
Tetanus		
Primary vaccinations	51	6
Reinforcing vaccinations	62	93

The year 1963 was the second in which Heaf testing, and BCG vaccination of those who were shown not already to have acquired resistance to tuberculosis, were offered to all pupils approaching school-leaving age. This included those at direct grant and private schools, as well as those at maintained schools. As before, the chest physician of the Region Hospital Board arranged for all Heaf positive reactors to be x-rayed, writing to their family doctors to tell them of the offer and later as to the result. During the year, 1,326 adolescents born between 1944 and 1949 were tested and the 1,208 of them who were Heaf negative were vaccinated. The great majority of those tested at Secondary Modern Schools were born in 1949. As in 1962, the proportion of Heaf positive children in the same age group varied greatly between different schools, but the schools which had the lower percentages in 1962 also had lower percentages in 1963, with one exception. The percentage found at Clare Secondary School in 1963 was much higher, being 7 as against the very low percentage of 2.5 found in 1962. This is interesting, as there is now no exception to the finding that the schools which have a high proportion of pupils who come from urban homes, have a lower percentage of positive reactors than those who come mainly from rural areas.

The schools with the higher Heaf positive rates in the 1949 age groups were Hadleigh, Stoke-by-Nayland, Breckland, Clare, Ixworth and Beyton. Milk has been pasteurised in the towns and in the large village of Mildenhall for many years and it is thought this may have some bearing on the findings. It will be interesting to see whether, after a few more years, the percentage of Heaf positive reactors is the same for the same age group at all schools.

At grammar schools, the children were older and the percentage of Heaf positive reactors greater, depending partly upon the proportion of sixth-formers at the school. As in 1962, the proportion of Heaf positive reactors was greater at Bury St. Edmunds and Sudbury than at Newmarket, which is in keeping with the fact that none of the Secondary Modern schools as listed above with a high proportion of Heaf positive reactors, comes within the catchment area of Newmarket Grammar School. The numbers at independent schools were again too small to be significant although they were large enough, after two years' testing at Culford and the East Anglian School for Girls to suggest that the percentage



of Heaf positive reactors amongst those about to leave these schools, is slightly below that at Newmarket Grammar School and considerably below that at Bury St. Edmunds and Sudbury.

In 1963 a greater proportion of parents of fifth-formers at the grammar schools (i.e. those born in 1948) expressed the wish for their children to be tested and vaccinated that year, if necessary, instead of waiting until they were nearer to school-leaving age. It was seen that the proportion of Heaf positive children amongst them was considerably higher, not only at Bury St. Edmunds and Sudbury but also (although to a lesser extent) at Newmarket, than was the proportion in the 1948 age group when this group was tested at the secondary modern schools a year and half earlier. This suggests the possibility that the higher Heaf positive rate at the grammar schools is not entirely due to the greater age at which these children have been tested, but may in part be due to the fact that some older children at these schools are meeting the tuberculosis infection during their last years at school. If this is the case it would be better to test, and vaccinate where necessary, at a younger age, as is done in secondary modern schools. It would certainly be much more convenient administratively. It is intended, therefore, that in 1964 vaccinations shall be carried out at the same age in both grammar and modern schools - that is during the calendar year after the children have their thirteenth birthdays.

The following table shows the number tested in each group during the year, and the number and percentage of Heaf positive reactors.

Year of birth.	Number tested	Positive reactors	Percentage of positive reactors
1944	2	0	0.00
1945	34	3	8.82
1946	106	16	15.09
1947	136	19	13.97
1948	183	21	11.48
1949	859	55	6.40
TOTAL	1,320	114	8.64

#### VERMINOUS CHILDREN

As mentioned in last year's report, it is left to the school nurses' discretion as to how often they carry out routine hygiene inspections at schools where the children are invariably "clean". The nurses visit at once if they or the head teachers suspect that the hygienic condition of any of the children needs attention.

In 1963 the nurses carried out 10,229 hygiene inspections and found 52 individual children verminous. The nurses got in touch with the parents of all the children found to have live vermin or nits, giving them printed directions in cleansing and where necessary, an emulsion. Small-tooth combs were lent or sold to parents requiring them. The children were excluded from school when this was thought desirable and, in any case, they were followed-up by the nurses until free from infestation.



## MEDICAL AND DENTAL EXAMINATION OF CHILDREN IN THE CARE OF THE COUNTY COUNCIL

The doctors inspected children in the long-term care of the County Council and the dental officers inspected all aged three years and over. Special examinations were also carried out when asked for by the Children's Officer.

## EXAMINATION OF ENTRANTS TO COURSES OF TRAINING IN TEACHING AND TO THE TEACHING PROFESSION

In accordance with Ministry of Education Circular 249, the school doctors examined 23 entrants to the teaching profession and 75 entrants to teachers' training colleges. Some of the latter were to be employed as temporary teachers pending their admission to college.

## REPORT OF THE PRINCIPAL SCHOOL DENTAL OFFICER

In 1963 the equivalent of three full-time officers was engaged in the School Dental Service and the statistical return shows an increase in the amount of work carried out. It is unfortunate that time was lost by illness of dental officers and in the early part of the year attendances at treatment centres were adversely affected by the bad weather. For some time it was impossible to move the mobile clinic and the officer using it was engaged in routine inspections. It says much for the tenacity of the staff that only three sessions were lost through dental officers being unable to reach their treatment centres.

The number of children inspected, over 14,000, is the highest recorded since 1948. Included in these were a number of children in primary schools which had not been visited for many years. They were found to have a large proportion of unsaveable teeth, which has affected the ratio of extractions to fillings. The position should improve when these children receive regular annual inspections, as probably will the "acceptance rate" which is at present less than 50%.

During the year an order was placed for a second mobile clinic and this should be in use in the southern part of the County early in 1964. The new clinic premises at Haverhill should be completed at about the same time thus advancing the provision of up-to-date treatment facilities throughout the County.

S. H. POLLARD,  
Principal School Dental Officer.

## PROVISION OF MEALS AND MILK IN SCHOOLS

The Chief Education Officer has kindly furnished the following report:

"The high percentage of children taking meals in 1963 showed an appreciable increase over the proceeding year and an average of 12,000 per day were served at schools during the Autumn term.

The final unit cost for food for the Financial Year 1962/63 was 10.08d. as against the estimated cost of 10.50d., and for overheads the final figure was 15.30d. which was the amount estimated.

The Education Committee's contracts for supplies operated satisfactorily and in spite of the weather conditions the vegetable supplies were maintained at reasonable prices. In spite of the abnormal weather conditions in the early months of the year, and the consequent difficulties in transport of supplies and meals, it was possible, through the great efforts which many of the Committee's staff made, to provide, the usual service at all schools.

There were further wage increases at the beginning of the fiscal year and in August, and there will be further increases in the next two years. The estimated unit cost for food during 1963/64 was 10.45d. and for overheads 16.35d.

A new Secondary Modern Canteen was opened at Breckland in the Spring Term, 1963, but due to the fact that no staff were available the Canteen at Hundon had to be closed and arrangements made for transporting meals from Wickhambrook Canteen.

Since the School Meals Service is mainly staffed by married women the "turnover" in appointments and resignations remained at a high level. Whilst most vacancies are quickly filled some areas still prove difficult and in certain cases (Hundon for example) it is impossible to attract applications from adequately qualified persons. During the year more Head Teachers have asked for assistance during the mid-day break and as a result more Supervisory Assistants have been employed."

Milk in Schools.

One-third of a pint of milk (either pasteurised tuberculin tested, pasteurised or tuberculin tested) was available on every school day to every child attending a maintained school. On a day chosen in September 13,422 children had milk, representing rather more than 77 per cent of the children in attendance that day.

## PHYSICAL EDUCATION

The Chief Education Officer has also furnished the following report:

Staffing.

Women teachers of P.E. are still very scarce and it is rare for a young specialist teacher to stay more than a year in a Secondary School, owing to the large number of vacancies all over the country and to the high marriage rate. For the schools, this is a most discouraging situation as there are so many aspects of girls' school life such as behaviour, deportment, posture, dress, health education and remedial work which suffer from lack of continuity of responsibility. In one school, however, there is a notable exception to this generalisation where a non-specialist teacher is making a considerable contribution to the general welfare of the girls since the last specialist teacher left.

The standard of work is variable and is generally much lower than it should be, as each new teacher tends to go back to the beginning. One sees a great deal of repetition of the early stages of movement training, especially in gymnastics and dancing.

The situation in regard to staffing on the Boys' side has improved from last year and all the secondary schools now have a teacher in charge of P.E.

Games - Girls.

The annual tournaments have been held throughout the year starting with Netball at Primary and Secondary level in March, April and May, Rounders in July and Hockey in November. All were well attended and thanks are due to the schools which acted as hosts this year. New or re-seeded playing fields have come into use at the following schools: Brandon, Hartest, Eriswell, Horringer, Ousden, Honington, Lavenham, Cockfield, Kersey, St. Edmund's R.C. and Long Melford.

Athletics.

West Suffolk again won the Suffolk County Championships and provided more than half of the Suffolk team which competed at the All England Meeting.

Soccer.

The County team maintained a satisfactory standard and a strong intermediate team has been built up.



Gymnastics is coming more into its own as a club activity among the boys and many are intending taking the Proficiency awards sponsored by the British Amateur Gymnastics Association.

Sailing and Camping were started as school activities and a nucleus of enthusiastic pupils have attended courses. Other schools are now actively participating in activities leading to the Duke of Edinburgh's Award. School parties in rock climbing and lightweight camping are undertaking expeditions.

The supply of larger fixed outdoor apparatus to primary schools is continuing and gradually building up. The standard of work in the schools is also gradually improving.

#### Teaching Courses.

Primary School Gymnastics - Sudbury - March

Primary School Games - Mildenhall - June, July

Primary & Secondary School Folk Dancing - Bury St. Edmunds and Newmarket - Sept., Oct., November.

These courses were all very well attended, and I am particularly grateful to all the Teachers and children who gave up evenings or Saturday mornings to demonstrate their work. Without their co-operation such courses would not be possible.

#### Physically Handicapped Children.

The weekly class for the teaching of swimming to these children has continued with great success. One of the most encouraging features is the general increase in the children's self confidence.

In one case, a marked acceleration in progress of reading and writing is attributed by the Headmistress to the child's prowess at the pool. The eldest boy gained a proficiency certificate for swimming 60 yds. breast and 30 yds. crawl stroke.

Sincere thanks are due to Mr. Martin, to the Hospital Authorities and to the Physiotherapy staff for their co-operation and interest.

### SCHOOL BUILDINGS

For the following report I am indebted to the County Architect:

"During the past year the Breckland Modern Secondary School has been completed. Steady progress has been maintained at the new County Girls' Grammar School at Bury St. Edmunds which is the largest school ever built by this Authority; it will be completed during the coming year. Good progress has also been made at the Phase II Extensions at Haverhill Modern Secondary and at the Sexton's Manor Primary School at Bury St. Edmunds - both being started during the year, and at Ixworth, the Further Education Centre is just about completed.

"The policy of providing temporary transportable classroom units has been continued at Schools where for one reason or another permanent extensions are not feasible. Such units have been provided at Hadleigh Aided Schools and Eriswell Aided, Horringer C.V.P. and Tollgate C.P. Schools.

"Whenever possible, improvements have continued to be made to teaching and sanitary accommodation, including the provision of hot water supplies; water closets have been installed at Great Cornard County, Horringer, Hopton and Kersey Controlled Voluntary Primary Schools. Drying Cabinets have been installed in ten Primary Schools.

"As regards the coming year it is proposed to make a start on the new Infants' School at Camps Road, Haverhill, new Infants' School at Honington, and Junior and Infants' School at Walsham-le-Willows. Also in the year's programme are new Junior and Infants' Schools at Great Cornard and Thurston and new E.S.N. School and Residential Hostel at Bury St. Edmunds. The large scheme for extending the West Suffolk College of Further Education, and the long-delayed extensions to the Bury Silver Jubilee Boys' School should also start during the year."



## STATISTICS

TABLE I

PERIODIC MEDICAL INSPECTION OF PUPILS  
ATTENDING MAINTAINED PRIMARY AND SECONDARY SCHOOLS

<i>Age Groups Inspected (by years of birth)</i>	<i>No. of Pupils Inspected</i>	<i>Pupils found to require treatment, including those already under such treatment</i>		
		<i>For defective vision (excluding squint)</i>	<i>For any of the conditions record- ed in Table III</i>	<i>Total individual pupils</i>
1959 and later	3	-	-	-
1958	640	24	47	64
1957	834	40	64	96
1956	338	17	28	43
1955	225	10	16	25
1954	233	17	10	26
1953	156	17	8	24
1952	119	13	5	16
1951	154	13	11	23
1950	84	12	3	15
1949	293	43	8	51
1948 and earlier	524	77	16	85
Total	3, 603	283	216	468

TABLE II

## OTHER INSPECTIONS

Number of Special Inspections	..	..	..	330
Number of Re-inspections	..	..	..	558
Total	..	..	..	888

TABLE III  
RETURN OF DEFECTS FOUND AT MEDICAL INSPECTION

<i>Defect or Disease</i>	<i>Periodic Inspections</i>		<i>Special Inspections</i>	
	<i>No. of defects</i>		<i>No. of defects</i>	
	<i>Requiring treatment</i>	<i>Requiring observation only</i>	<i>Requiring treatment</i>	<i>Requiring observation only</i>
Skin .. .. .	41	2	-	-
Eyes Vision .. .. .	283	63	7	-
Squint .. .. .	21	5	-	-
Other .. .. .	22	1	-	-
Ears Hearing .. .. .	2	17	2	3
Otitis Media .. .. .	9	5	1	-
Other .. .. .	1	-	-	-
Nose and Throat .. .. .	27	25	-	-
Speech .. .. .	20	12	-	1
Lymphatic Glands .. .. .	2	9	-	-
Heart .. .. .	5	28	-	-
Lungs .. .. .	23	8	-	-
Developmental—				
Hernia .. .. .	3	4	-	-
Other .. .. .	5	6	-	-
Orthopaedic—				
Posture .. .. .	4	6	-	-
Feet .. .. .	13	2	-	-
Other .. .. .	10	7	-	-
Nervous system—				
Epilepsy .. .. .	3	4	-	-
Other .. .. .	1	2	-	-
Psychological—				
Development .. .. .	1	5	6	3
Stability .. .. .	3	21	-	-
Abdomen .. .. .	-	1	-	-
Other .. .. .	10	16	-	-

TABLE IV  
AVERAGE HEIGHTS AND WEIGHTS OF SCHOOL CHILDREN (November, 1963)

<i>Children Measured and Weighed</i>	<i>Year of Birth</i>	<i>Average Height</i>		<i>Average Weight</i>	
		<i>Ft.</i>	<i>Ins.</i>	<i>Sts.</i>	<i>lb.</i>
21 Boys	1958	3	7 $\frac{3}{4}$	3	3 $\frac{3}{4}$
12 "	1957	3	10 $\frac{1}{2}$	3	6 $\frac{1}{4}$
8 "	1956	3	11 $\frac{3}{4}$	4	0 $\frac{1}{2}$
13 "	1955	4	2	4	3 $\frac{3}{4}$
7 "	1954	4	4	4	12 $\frac{1}{2}$
12 "	1953	4	6 $\frac{3}{4}$	5	5 $\frac{3}{4}$
22 "	1952	4	10	6	3 $\frac{1}{4}$
50 "	1951	4	10 $\frac{3}{4}$	6	6
35 "	1950	5	1 $\frac{3}{4}$	7	5 $\frac{1}{4}$
40 "	1949	5	3 $\frac{1}{4}$	8	4 $\frac{1}{2}$
6 Girls	1958	3	7 $\frac{1}{2}$	3	4 $\frac{1}{4}$
16 "	1957	3	10 $\frac{1}{2}$	3	9 $\frac{1}{2}$
9 "	1956	4	0	3	9 $\frac{1}{2}$
16 "	1955	4	3 $\frac{1}{4}$	4	5 $\frac{3}{4}$
12 "	1954	4	5 $\frac{1}{2}$	4	12
11 "	1953	4	5 $\frac{3}{4}$	5	8 $\frac{3}{4}$
21 "	1952	4	9 $\frac{1}{4}$	6	0 $\frac{1}{4}$
26 "	1951	4	11 $\frac{3}{4}$	6	12 $\frac{3}{4}$
29 "	1950	5	1 $\frac{3}{4}$	7	11 $\frac{1}{4}$
40 "	1949	5	2 $\frac{1}{2}$	8	2

TABLE V

## DENTAL INSPECTION AND TREATMENT

(1) Number of pupils inspected by the Authority's Dental Officers—

(a)	At Periodic Inspections	..	..	..	..	..	13,794
(b)	As Specials	..	..	..	..	..	309
	<b>Total</b>	..	..				<u>14,103</u>
(2)	Number found to require treatment	..	..	..	..	..	5,133
(3)	Number offered treatment	..	..	..	..	..	5,062
(4)	Number actually treated	..	..	..	..	..	2,296
(5)	Attendances made by pupils for treatment, excluding those recorded under 11 (h)	..	..	..	..	..	6,011
(6)	Half-days devoted to: Periodic Inspection		..	..	..	..	146
	Treatment	..	..	..	..	..	1,057½
	<b>Total</b>	..	..				<u>1,203½</u>
(7)	Fillings — Permanent Teeth	..	..	..	..	..	3,286
	Temporary Teeth	..	..	..	..	..	1,321
	<b>Total</b>	..	..				<u>4,607</u>
(8)	Number of Teeth filled — Permanent Teeth	..	..	..	..	..	2,893
	Temporary Teeth	..	..	..	..	..	1,260
	<b>Total</b>	..	..				<u>4,153</u>
(9)	Extractions — Permanent Teeth	..	..	..	..	..	359
	Temporary Teeth	..	..	..	..	..	714
	<b>Total</b>	..	..				<u>1,073</u>
(10)	Administration of general anaesthetics for extraction	..	..	..	..	..	255
(11)	Orthodontics: (a) Cases commenced during the year	..	..	..	..	..	27
	(b) Cases brought forward from previous year	..	..	..	..	..	10
	(c) Cases completed during the year	..	..	..	..	..	10
	(d) Cases discontinued during the year	..	..	..	..	..	3
	(e) Pupils treated with appliances	..	..	..	..	..	23
	(f) Removable appliances fitted	..	..	..	..	..	32
	(g) Fixed appliances fitted	..	..	..	..	..	-
	(h) Total attendances	..	..	..	..	..	241
	(j) Half-days devoted to orthodontic treatment	..	..	..	..	..	30 (equivalent)
(12)	Number of pupils supplied with artificial dentures	..	..	..	..	..	13
(13)	Other operations: Permanent Teeth	..	..	..	..	..	961
	Temporary Teeth	..	..	..	..	..	1,856
	<b>Total (13)</b>	..	..				<u>2,817</u>



## APPENDIX

ABRIDGED REPORTS OF THE COUNTY MEDICAL OFFICER ON  
FLUORIDATION OF WATER SUPPLIES3rd September, 1963

In July a report on "The Conduct of the Fluoridation Studies in the United Kingdom and the Results achieved after Five Years" was published. It showed that there was substantially less decay in the teeth of young children who had the benefit of fluoridation, that there was no evidence of harm and that the addition of fluoride to water presented no technical difficulties. Consideration to the report by the Standing Dental Advisory Committee and the Joint Sub-Committee of the Standing Medical Advisory Committees for England and Wales and for Scotland confirmed the conclusions reached and in December the Minister said that he was ready to approve proposals from the Local Health Authorities to make arrangements with water undertakers for the addition of fluoride to water supplies which were deficient in it naturally. There is no longer any doubt that the presence of fluoride in water at a concentration not exceeding 1 p.p.m. has a marked caries preventive effect, and the studies in this country show that fluoridation brought about a substantial improvement in the dental condition of children in the study areas up to five years of age. Children 5 - 7 years also showed some improvement. The 3 and 4 years old children in the fluoridation areas had fluoride for the whole of their lives and during the whole of the foetal development. These children are thus likely to have received the full dental benefits of fluoridation and no further improvement due to fluoridation can be expected.

Studies of more than 7,000 children, aged 12 - 14 years, in 21 communities in the United States demonstrated that the instances of dental caries are inversely related to the concentration of fluoride in the water. With very low levels of fluoride caries was widespread and severe but with about 1.p.p.m. the children had only 1/3rd as much caries as those of the same age in districts where the water was virtually fluoride free. With concentrations of fluoride above 1.p.p.m. there was comparatively little further reduction in caries.

The findings of these investigations were confirmed by further surveys carried out over the past 20 years in many areas which now include the United Kingdom. In every case low instances of caries were reported with appreciable quantities of fluoride in the water. Similar results have been obtained when fluoride has been added to water supplies at the optimal concentration (1.p.p.m.) - in effect, fluoride studies which have been in progress long enough for the benefits of fluoride to be reliably assessed, show that the incidence of dental caries has been reduced by 50 - 60%.

On the other hand it must never be forgotten that fluoridation will not solve the problem of dental caries. It is a step - and an important step - in the right direction but it will still be necessary to continue teaching parents the necessity for protecting their offspring from the excessive consumption of confectionery. Much dental decay can be prevented by traditional methods, that is to say, by ensuring an adequate intake of foods which build strong bones and teeth, by limiting the consumption of carbo-hydrates especially between meals, by strict dental and oral hygiene and by regular dental inspections and treatment where necessary. All these other methods of prevention are important and should continue to be practised whether fluoride is added to the water or not. Several other methods have been suggested and for some, beneficial effects have been claimed. No other method is as effective as fluoridation of water supplies, however, and there is no convincing evidence at all that some other methods suggested have any effect.

Topical applications, which are very time consuming, entail further cleansing and polishing of the teeth, drying and isolating them and finally applying a solution of fluoride every four months or so. Several applications are usually necessary as the process must be repeated as each group of teeth erupts. In the United States reductions in caries of up to 40% have been claimed from treatment with sodium fluoride solutions but this has not always been borne out elsewhere and trials in this country have produced very inconclusive results. It is doubtful if the relatively small reduction in caries found justifies the time involved.

Results have been claimed from the use of Fluoride Tablets based mainly on a study in Switzerland. There is as yet only a limited amount of evidence, however, on their efficiency although if fluoride tablets having the correct amount were given, preferably in water, spread over each day the effect should be the same as from fluoridation of the water supplies. To achieve the maximum effect tablets would have to be administered regularly each day for a minimum of 8 years and their use, therefore, involves a considerable degree of perseverance and supervision and care which the average parent could not be expected to undertake

The effectiveness in reducing dental caries of Toothpaste containing sodium fluoride has not so far been conclusively proved. Claims have recently been made in the United States for the effectiveness of a toothpaste containing stannous fluoride but this has not been generally accepted, for example, the British Dental Association have recommended that clinical trials be carried out in this country and these are now in progress. Results, however, will not be known for some time. As with topical applications the application of fluoridated toothpaste can only be a topical surface one and therefore cannot be compared with that of fluoridated water as a result of which fluorine is deposited during the tooth formation throughout the enamel and dentine.

Of recent date a ruling has been given in the Irish High Court on a constitutional issue raised by the Health (Fluoridation of Water Supplies) Act, 1960. Mr. Justice Kenny held that the Act was not unconstitutional. He was giving reserved judgment in the action in which Mrs. Gladys Ryan, a housewife, sought to have the Act held unconstitutional.

He commented:- "I am satisfied beyond the slightest doubt that the fluoridation of public water supplies in this country to a concentration of one part per million will not cause the slightest damage or injury to the health of anybody living in this community."

The case lasted 62 days, during which evidence had been given by experts from many parts of the world.

So far as the wishes of the County District Councils, West Suffolk, are concerned the majority are in favour of the water supplies being fluoridated.

The District Medical Officers of Health in the County without exception have advised their respective councils to agree to the fluoridation of their water supplies and with the exception of one Rural District this advice has been accepted.

As the committee will be aware a great deal of controversy has taken place around this subject for a considerable time. It may truthfully be said that more cudgels have been taken up both for and against fluoridation but that too little attempt has been made to understand clearly the fact of the matter.

#### Recommendation

I recommend that the Council make arrangements with the Statutory Water Undertakers covering the whole of the administrative county for the addition of fluoride to public water supplies which are naturally deficient in fluorine, to the level appropriate for the prevention of dental decay, that is one part per million, plus or minus 10%, and that financial provision may be made in the estimates for 1964/65.

#### 6th January, 1964

1. On 9th September, 1963, a report on the Fluoridation of Water Supplies was submitted to the Ambulance and Medical Services Sub-Committee. The report was approved by the Sub-Committee and subsequently confirmed on 7th October, 1963, by the Health and Welfare Committee. Fourteen members voted for the recommendation to fluoridate the public water supplies and four were against it. At the meeting of the Council held on 18th November, 1963, the following paragraph appears in the report of the Committee to the Council:

#### "Fluoridation of Water Supplies

(8) The Council will be aware that the Minister of Health has expressed the hope that authorities would make arrangements covering all areas where water is deficient in fluoride so as to secure the improvement in dental health which fluoridation would bring about. Your Committee have carefully considered this matter and have had before them



a Report by the County Medical Officer thereon, together with the views of the various Water Undertakers. They have also had before them a resolution which was passed unanimously by the West Suffolk Division of the British Medical Association urging the County Council to arrange for fluoridation of the water supply, together with a letter from the West Suffolk Parish Councils Association protesting against the addition of fluoride, the cost of which is likely to amount to £6,000 per annum. Having regard to all the circumstances your Committee recommend:-

That the Council make arrangements with the Statutory Water Undertakers covering the whole of the Administrative County for the addition of fluoride to the public water supplies which are naturally deficient in fluorine, to the level appropriate for the prevention of dental decay (i.e. one part per million, plus or minus 10 per cent.) and that financial provision be made therefor in the estimates for 1964/5." On the presentation of the report it was moved and seconded that Paragraph 8 - be referred back. The Chairman of the Committee and members of the Council having spoken thereon, the motion being put to the vote was declared carried.

2. At the last meeting of the Ambulance and Medical Services Sub-Committee, held on 9th December, 1963, I undertook to write an additional paper on fluoridation of water supplies. This report, therefore, reviews the position regarding proposed fluoridation of the public water supplies, since I understand individual members have been subject to considerable propaganda from a body calling itself the National Pure Water Association. It is also known that a writ has been issued against the Watford Borough Council for a declaration that the Council, which has added fluoride to its water supplies since 1956 at the request of the Minister of Health, is not entitled to do so.

3. In August last year, a Dublin housewife sought a declaration in the Eire High Court on a constitutional issue raised by the Health (Fluoridation of Water Supplies) Act 1960. The action sought to declare that the Government was acting unconstitutionally in its legislation making it obligatory for Water Undertakers to raise the fluoride content of the water supply to one p.p.m. She lost and the hearing, which lasted 65 days and was the longest in the history of the Dublin High Court, was notable for a number of things. Mr. Justice Kenny determined that he would hear medical evidence and accordingly practically every statement, with which Members of the Council must have become so familiar from the Press and from the publicity material which they have been sent about fluoridation, was put before the Court by witnesses from all over the world. The Judge, after reviewing this exhaustive volume of evidence, said that the compulsory fluoridation of water did not infringe any of the personal, family or educational rights guaranteed by the constitution and he was satisfied that the use of water supplies with one p.p.m. of fluoride would not cause harm to the health of anyone. The Judge went on to criticise some of the witnesses who gave evidence against fluoridation because he said that throughout their evidence there was an air of passionate conviction, and they were determined at all costs to make a case against fluoridation and not consider any of its advantages. The housewife gave notice of appeal, but this is in relation to the legal issues and does not alter the conclusions arising from the vast volume of medical and scientific evidence.

4 It is desirable to recapitulate some principles affecting this matter. Dental decay, especially in children, is a major public health problem at the present time, despite all that has been done through the National Health Service and the School Health Service by way of treatment and advice. The situation at the present time is as follows:-

- (i) At the age of three years two thirds of the children already show signs of caries.
- (ii) At the age of 5 years the average child has between five and six teeth, decayed, missing or filled.
- (iii) By the age of twelve years only two per cent of children have their full complement of teeth naturally sound.

Undoubtedly sweet eating is the biggest contributory factor in producing dental caries in children, and programmes designed to promote a better standard of hygiene have made little headway.



5. In 1892, Sir James Crichton-Browne suggested that there was a connection between fluoride in the diet and decreased liability to dental caries. Black and McKay in the United States (1916) revived interest in this possibility by their work which was primarily concerned with the mottling of teeth which occurred in certain districts. Mottling was also noticed in the Maldon area, Essex, in 1928 by Ainsworth and since then has been reported from every continent in the world. Eventually it was shown by Churchill (1931), Smith and Smith (1932), Ainsworth (1933) and Elvove (1933) that mottling of dental enamel was associated with the high concentration of fluoride in drinking water.

6. In 1944, Weaver working in Britain showed that among children aged twelve years living in South Shields where the fluoride content of the water was 1.40 p.p.m. the incidence of dental caries was 45 per cent less than among similar children living in North Shields which had only 0.25 p.p.m. of fluoride in the drinking water. All water supplies contain some quantity of fluoride varying from minute amounts to 14 p.p.m. or more, although the highest natural concentration in Great Britain is 6 p.p.m. For many years it had been known that where fluoride was present to an appreciable amount, the level of dental caries in children was reduced. Detailed enquiries were undertaken on this subject in a number of countries and in 1945 trials were undertaken in Canada and the United States to see whether there was a reduction in dental caries in children if fluoride were added to water supplies to bring the level to 1 p.p.m. The results achieved were so successful that the Medical Research Council advised that a Mission should be sent from this country to study what was being achieved in North America. The report of the Mission in 1953 was that results emerging in the areas where the water was having the fluoride supply adjusted were similar to those where the same concentration of fluoride was found naturally. Most exhaustive enquiries failed to reveal any difference in people's health between the areas concerned, and the Medical Research Council's Mission advised that the adjustment of the fluoride level in water supplies was a valuable health measure because of its effect in reducing dental disease in children and added that all the evidence pointed to the beneficial effects continuing into later life. The recommendation was that fluoride should be added to water supplies in this country in some selected communities where the natural level was low.

7. In July, 1963, a report on "The Conduct of Fluoridation Studies in the United Kingdom" and the results achieved after five years were published over a five year period, 1955-60 studies were carried out in three of the areas in which the local authorities had already expressed interest in fluoridation. The areas chosen for study were: Watford Borough, part of the County of Anglesea and Kilmarnock Burgh in Ayrshire. The control areas were Sutton, Surrey, the remainder of the County of Anglesea and the county town of Ayr. Andover in Hampshire was originally selected to take part in the trial but after the Town Council had agreed, they later rescinded their decision as a result of activities of persons who opposed fluoridation. Before the commencement of fluoridation dental examinations were carried out to establish a base-line in all areas, after which the examinations were repeated annually in respective groups of children between three and four years of age and school children of each year of age were examined. At the same time the safety of fluoride was carefully studied by a threefold approach:

- (i) The 89 General Medical Practitioners working the areas were asked to report any cases of illness which might in any way be attributable to fluoridation.
- (ii) By comparison of mortality statistics in naturally fluoridated areas with matched low fluoridated areas.
- (iii) By specific investigations into such matters as osteochondritis, the accumulation of fluoride in bone, malnutrition and dental mottling, Mongolism, peptic ulcer, sickness - absence from school.

All these investigations proved negative, and taking the major causes of death as cancer, cardiovascular disease and renal disease in natural fluoridated areas compared with low fluoridated areas, there was no significant difference in the standardised rates. The conclusions of these five years of study were:

- (a) Five years of adding fluoride for the three areas where the level was low has brought about a substantial improvement in the teeth of young children.
- (b) The results of adding fluoride to water are in line with the experience in other parts of the world where this has been done.
- (c) In spite of continual vigilance from medical and other health staffs, no evidence of harm has been found.

8. A short time after the ending of the five years' trial, Kilmarnock Burgh Council, subjected to an intensive press campaign against fluoridation, decided to discontinue the arrangements. This was despite the advice given by the Medical Officer of Health, despite the dental health of the children being improved, with no harm to the population, and despite 32 out of the 34 local doctors making representations against the decision. In Anglesea and Watford the arrangements still continue, although as has already been noted, the Watford Borough Council is already reported to be the subject of legal action.

9. On 14th December, 1962, the Ministry of Health issued a circular 28/62 stating that the Minister had informed Parliament that he was ready to approve the making of arrangements by local health authorities with water undertakers for the addition of fluoride to water supplies which are deficient in it naturally. In this country, the Minister of Health's action in advising local health authorities to exercise powers under Section 28 of the National Health Act, 1946, to prevent dental diseases, stems from the Minister's duty under Section 1 of the Act. This requires the Minister of Health to promote a comprehensive Health Service designed to secure improvement in the physical and mental health of the people and the prevention, diagnosis and treatment of disease. The decision of the Minister has been endorsed by the British Medical Association, the British Dental Association and the County Councils Association.

10. As the Committee will be aware, a great deal of controversy has taken place around this subject for a considerable time. It may truthfully be said that more cudgels have been taken up both for and against fluoridation, but that too little time has been made to understand clearly the effects of the matter. Broadly speaking, the objections fall into two main groups, the first is that fluoridation is unsafe, and the second, it is unethical, immoral, undemocratic, etc. It is, however, surprising to see that many of those who complain that fluoridation is an infringement of their freedom, are perfectly ready to enforce a dietetic regime on the community by depriving children of sweets and other forms of carbohydrate that they allege without direct clinical proof, are the causes of dental caries. Conversely those who say that fluoridation is unsafe, are quite prepared to argue that those who want to use it should do so, with their children, by the use of tablets. They do not seem to see anything incongruous in arguing that fluoride is a deadly poison, which will cause the most horrible diseases, and yet at the same time be parties to the use of some dangerous substances by their families. Fluoride tablets contain 1 mg fluoride. In a simple vehicle such as sodium chloride the recommended dosage allows for variation, both in the fluoride content of the local water supply and in the age of the children concerned. Different dosage levels are prescribed for water containing less or more than 0.3 p.p.m. and for children aged under two years. The tablets are dissolved either in water, milk or some other beverage, and the final solution is not affected by heating. The use of tablets differs from the consumption of fluoridated water, in that it supplies the daily intake of fluoride in a single dose. McClure has estimated that the daily intake of fluoride when consuming water containing 1 p.p.m. fluoride, varies from 0.5 to 1 mg. For children aged 1 - 12 years with tablets the same daily intake is obtained in one dose. There is, however, no evidence to suggest that this is harmful in any way. The great disadvantage of this method is the practical one, namely, that to be effective, the child must have its tablets every day for the first eight years of its life; this is asking a great deal of perseverance, supervision and care, which few parents could be expected to undertake. It is necessary to add, however, that haphazard administration is almost useless, and overdosing carries a risk of mottling of teeth. For these reasons fluoride tablets are not recommended for use by the general public.

11. It would be tedious to repeat so much of what is said, particularly when it can be said that there are some 6,000 articles in the Medical and Dental Press. On this matter,



as County Medical Officer of Health, I would never be party to a procedure which was in any way inimical to the Welfare of the Community, and in the knowledge of the full responsibilities that devolve on me, I can summarise the position as follows:-

- (a) There is no evidence whatsoever that the presence of fluoride to the extent of 1 p.p.m. in water supplies, causes any ill effect, in spite of all that the opponents of fluoridation say. There has never been any clinical evidence produced of ill health and I have no hesitation in saying that this cannot be controverted by any Medical Practitioner who has acquainted himself with all the facts, but this will not prevent continued statements being made by lay people as to vague illnesses and vague diseases being caused by fluoridation.
- (b) Considerable publicity was given in the national press to an article by Berry and Trillwood in the British Medical Journal of 26th October, 1963, stating that cell growth was inhibited by fluorides. A reply by Professor Neil Jenkins of Newcastle draws attention to certain points in the design of the experiments and he points out that no attention was paid to the normal plasma contents of fluoride, which, unless the intake is grossly excessive, it is maintained by the body at a near constant level, at approximately 0.18 p.p.m. The minimum concentration at which Berry and Trillwood claim inhibition of growth in culture of cells, derived originally from human cancer and mouse fibroblasts is, in fact, less than that normally present in the body. In addition, epidemiological surveys have shown that no differences in growth can be detected in children born and brought up in areas having wide variations in the fluoride content of their respective drinking waters.
- (c) During recent months, suggestions have been made that there might be danger in drinking fluoridated water which has been left boiling for a long time, or in using fluoridated water for preparing stews, soups, preserves and other foods which require prolonged cooking. I am advised that it is the Ministry's view, based on the advice it has received from its technical advisers, that no danger can result from the prolonged boiling of fluoridated water. A recommended level of 1 p.p.m. for the fluoridation of water was chosen in the knowledge that it provided a wide margin of safety and in the further knowledge that a person's intake of fluoride varies from meal to meal and from day to day. Such variations are harmless and it is the average intake over a prolonged period which matters, even so, the safety factor is such that a person would come to no harm from persistent consumption of fluoridated water which had undergone prolonged boiling, or foods prepared with fluoridated water which had undergone prolonged cooking. The cooking habits of housewives in areas where the water contains natural fluoride are no different from the habits in any other parts of the country, and in those areas of natural fluoridation, no evidence of harmful concentration of fluorides has ever been produced.
- (d) It has been stated that sodium fluoride diluted in water at 1 p.p.m. is poisonous as compared with the naturally occurring calcium fluoride. When a chemical determination of the fluoride ion is made it would be impossible to differentiate between fluoride ions naturally present and



those added, thus they have identical chemical properties, and the evidence is conclusive that the effect of naturally occurring fluoride and added fluoride in reducing the incidence of dental caries, are also identical for the same concentration of fluoride ion.

- (e) The Councillors who were members of the Education Committee in 1955, may recall that in conjunction with the Ministry of Health, an investigation was carried out in Bury St. Edmunds where the fluoride content of the water is less than 0.01 p.p.m. into an allegation by Kemp, Murray and Wilson, *Lancet*, 1942 (2) p. 393, that fluoride in low concentrations in the drinking water leads to Scheuermann's disease - osteochondritis of the spine in adolescents. For this purpose, the spines of 200 boys in Braintree, where the fluoride content of the water supply was about 3.5 p.p.m. were X-rayed to compare with a similar number of adolescent boys in Bury St. Edmunds. This investigation was part of a series of studies carried out during 1955, involving dental, medical and radiological examination of considerable numbers of school children in seven areas of Essex, with a level of naturally occurring fluoride which was high in the domestic water supplies. The findings were compared with those in corresponding groups of children from areas where the fluoride content is low in parts of Essex, Suffolk, Middlesex and Surrey. The following points emerged from the studies:-

- (i) At a level of 1 p.p.m. fluoride in water, a substantial reduction of dental caries occurred without mottling of teeth.
- (ii) A comparison was made with certain diseases (constipation, parasthesia, boils, urticaria, alopecia, brittle nails, and dermatosis) reported by Dr. Speira as due to fluoridation, no difference was found in the high compared with low fluoridated areas. In the investigation no support was found for the theory that fluoridation plays an important part in the incidence of spinal defects.
- (iii) There is no difference, both concerning the effect and the reduction of dental decay and absence of any ill effect as between 1 p.p.m. of fluoride occurring in the water supplies naturally, or being raised to that level by the addition of sodium fluoride. Arguments that seek to prove that calcium fluoride is the compound that occurs naturally, cannot be substantiated and because of the ionisation of inorganic substances in solution, all that is of concern is the existence of the fluoride ion to the extent of 1 p.p.m.

- (iv) It has been suggested in some quarters that fluoride could be equated with Thalidomide. Thalidomide is a highly complex substance introduced as a drug, and unlike fluoride, is neither found in nature nor as a trace element in the human body. What the Thalidomide fear established, was the need for improved methods of drug testing and had the testing of this drug been done on the basis of a five year field study, made by the Ministry of Health in relation to fluoride in this country, things would have been different. If only a fraction of field study given to the introduction of fluoride to water naturally deficient had been applied to Thalidomide, the dangers would have been manifest very quickly.
- (v) To those who possess a knowledge of the administration of food supplements, it is an impossible administrative undertaking to issue fluoride in tablet form. As a measure of preventive medicine, there is no substitute to the raising of the fluoride level in the public water supplies.
- (vi) It is untrue to say that the benefit of fluoride only affects children. Manifestly the earlier protective measures are introduced, the better results for children, and, as time goes on, the better results for adults.
- (vii) Contrary to the situation that lay people who are opposed to fluoridation would like to suggest, there are not two schools of thought in the medical and dental professions. There is a surprising and indeed almost unanimous agreement in the result of research, but as is inevitable, in every walk of life, a few individual professional people have views that do not command the support of their colleagues. The safety and efficiency of fluoridation is apparent from the way in which so many official commissions and committees have recommended the adoption of fluoridation after full consideration of all the evidence.

#### Recommendation

I again recommend that the Council make arrangements with the Statutory Water Undertakers covering the whole of the administrative county for the addition of fluoride to public water supplies which are naturally deficient in fluorine, to the level appropriate for the prevention of dental decay, that is 1 p.p.m., plus or minus 10%, and that financial provision may be made in the estimates for 1964/5.

**D. A. McCracken.**

County Medical Officer of Health





